FY07-LXI (61)-152

"Effects of Aging on Treated Activated Carbons"

Submitted by: EERC
Principal Investigator: John Pavlish

PARTICIPANTS

Sponsor	Cost Share
U.S. DOE	$40,870
EPRI	$25,000
SaskPower	$10,000
Otter Tail Power Company	$ 5,000
NDIC	$40,000
Total Cost	$120,870

Project Schedule – 10 Months	Project Deliverables
Contract Date – 6/19/07	Status Reports:
Start Date – 6/1/07	9/30/07 (✓); 12/31/07 (✓)
Completion Date – ~~3/31/08~~	Final Report: ~~4/30/08 ( )~~
Extended To – 3/31/09	4/30/09 ( )

OBJECTIVE / STATEMENT OF WORK:
EERC proposes to evaluate the effects of storage on activated carbons (ACs) by evaluating the aging effects that might alter the physical or chemical properties of the ACs, which could impact the mercury capture efficiency

STATUS

July 1 – September 30, 2007
The EERC is presently revising the plans for temperature and humidity control chambers in order to accommodate the samples. Construction of the chambers will be completed next quarter along with troubleshooting to ensure steady state conditions.

October 1 – December 31, 2007
Construction was completed and shakedown testing of the chambers ensured that flows were consistent and that the temperature and humidity of all chambers could be maintained within acceptable allowances. The test matrix was reviewed with the project sponsors. Several weeks of troubleshooting were required to achieve repeatable baseline tests. Testing of sorbents in the chambers will be initiated in the next quarter.

January 1 – March 31, 2008
The project was idle while troubleshooting could be done with the bench-scale system. It appears a chemical solution that has been identified is the problem. It is anticipated that next quarter, the active phase of the project can be started.

April 1 – June 30, 2008

The project was initiated and carbon testing started. Carbons were evaluated for mercury sorption properties.

July 1 – September 30, 2008

No testing results were obtained during the quarter. Sample analyses that were sent for external analysis became available. The samples contained differing percentages of Bromine and some heated samples. Further investigation is needed to interpret the results of these analyses.